

Claims

What is claimed is:

5        1. A boiler tube clamp device for clamping together and aligning a mating pair of boiler tube ends to enable welding the two boiler tube ends together, the device comprising:

a narrow elongated rigid bar comprising a V-shaped channel to receive a mating pair of boiler tube ends aligned in the channel, the rigid bar configured so that the width 10 of the V-shaped channel spans less than half a circumference of a boiler tube, and a flange rigidly secured to the V-shaped channel, the flange having a series of paired openings therethrough spaced apart along the length of the bar;

two U-bolts bolted to the bar with each U-bolt secured through a pair of openings in the flange so that one U-bolt is adapted to secure an end of one boiler tube positioned 15 in the V-shaped channel and the other U-bolt is adapted to secure an end of a mating boiler tube positioned in the V-shaped channel with the ends of the boiler tubes aligned and secured together in an exposed area between the U-bolts so that the entire circumferences of the ends of the boiler tubes not positioned within the V-shaped channel are exposed for welding the boiler tube ends together.

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2. The device of claim 1 wherein the two U-bolts are secured in the flange by nuts so that the two U-bolts are adapted to be loosened to fit the boiler tube ends and tightened to secure and align the boiler tube ends in the V-shaped channel.

3. The device of claim 2 wherein the U-bolts are adapted to be adjustable in the length of the U-bolts protruding from the flange so that the device is adapted to accommodate a variety of boiler tube sizes.

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4. The device of claim 1 wherein the rigid bar is formed of a stamped metal bar and the flange and paired openings are configured to fit two standard U-bolts therein.

5. The device of claim 1 further comprising two jacking screws adjustably 10 screwed through two threaded holes at an interior joint of two sides of the V-shaped channel, one at each end of the V-shaped channel, for better interior tube alignment when the mating surfaces or outside diameters of the boiler tubes are not exactly the same to enable better alignment of the inside diameters for a smoother flow through the tubes.